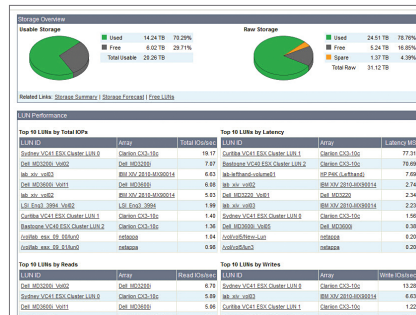




Heterogeneous Storage Management for Your Physical AND Virtual Infrastructure

SUPPORTED STORAGE DEVICES INCLUDE:

- EMC®
 - NetApp®
 - IBM®
 - Dell®
 - Dell EqualLogic™
 - Xlotech™
 - HP®
 - LSI™
 - ONStor™
 - Pillar®
 - Sun®
 - Dell Compellent
 - SGI™
 - HP 3PAR
- And more!



You probably don't need anyone to tell you that virtualization has added a whole new set of storage performance and capacity management challenges to what was already a tough job! But, our storage management software can make your job a lot easier—and at a very affordable price point that won't attract unwanted attention from your CFO.

SolarWinds Storage Manager helps you keep a sharp eye on the performance and capacity of your physical and virtual storage infrastructure—end to end, from VM to spindle! With Storage

Manager at your side, you can quickly and easily monitor storage performance, isolate hotspots, automate storage capacity planning, map VMs to physical storage, analyze storage usage to reclaim storage space, manage fibre channel switches, gain visibility into your multi-vendor SAN fabric and more—all through a single pane of glass!

Storage Manager Highlights:

Storage Performance Monitoring & Hot Spot Isolation

- Simplifies troubleshooting of shared storage and server performance bottlenecks
- Isolates storage I/O hot spots and the source of contention

Automated Storage Capacity Planning

- Automates the collection of forecasting data
- Makes it easy to view storage growth rates and project when storage capacity will be reached and forecast costs

VM to Physical Storage Mapping

- Automatically maps VMs, applications and logical connections to the physical storage environment, enabling root-cause analysis

Storage File Analysis and Data Classification

- Provides insight into the types of files being stored, their age and access history, so you can reclaim wasted space and stay compliant

Storage LUN Views

- Understand how your virtual infrastructure is mapped to your LUNs
- Identify which VMs are using the most storage I/O and the most storage capacity
- Determine if your LUN is being affected by other LUNs on the same RAID group or pool

Multi-Vendor SAN & Fibre Channel Switch Management

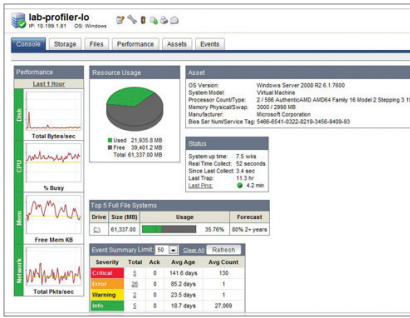
- Single pane of glass across your multi-vendor SAN with support for arrays from all of the major storage vendors
- Delivers visibility into fibre channel switches and your SAN fabric

In-Depth Analytics & Storage Reporting

- Aggregates data from multiple arrays and vendors into consolidated dashboards and reports
- Shows capacity, allocation, usage and forecasting at all levels of the storage environment (raw, RAID, LUN, data store and file system)

Supports the most common arrays from all of the major storage vendors

SolarWinds Storage Manager Features



Storage I/O Hotspot Detection

Storage Manager looks across your multi-vendor SAN, identifies potential issues, and enables you to quickly drill down to detailed information about the physical or virtual resource causing the problem. By mapping your virtual and physical infrastructure to physical storage, Storage Manager makes it easy to isolate storage I/O hotspots before they impact performance. Even better, Storage Manager shows you how a potential bottleneck can impact the physical and virtualized elements in your infrastructure and identifies available capacity you can leverage for a quick fix.

Storage Manager can even help you manage the “VM I/O Blender” effect that can occur as VMs multiply. As traditional, predictable I/O patterns get tossed and new streams blend together to create new I/O dynamics and transient hotspots, the storage I/O hotspot detection capabilities in Storage Manager can help you pinpoint bandwidth issues, quickly resolve them, and prevent them from happening again.

The screenshot shows the 'Logical Mapping' section of the SolarWinds Storage Manager interface. It contains a table with the following columns: Name, Description, Color, File Size, File Type, File Count, Status, and Operations. The table lists various storage volumes and their associated physical resources.

Name	Description	Color	File Size	File Type	File Count	Status	Operations
...

VM to Physical Storage Mapping

The VM to physical storage mapping feature in SolarWinds Storage Manager automatically maps VMs and logical connections to the physical storage environment in order to provide you with a complete view across all resources in your virtualized infrastructure. Storage Manager is the only intuitive, web-based storage management solution that combines VM to physical storage mapping with storage monitoring, reporting, alerting and forecasting across the entire multi-vendor storage stack for DAS, NAS and SAN systems.

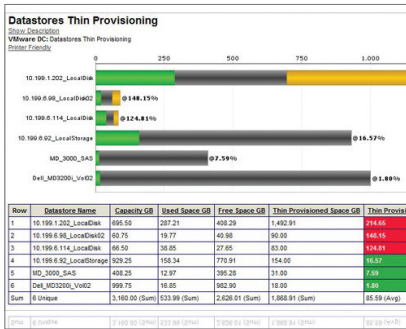
Automated Storage Capacity Planning

Storage Manager collects storage forecasting data and tracks performance over time to identify hot spots, peak hours and potential outages. By automating the collection of forecasting data, Storage Manager makes it easy to view growth rates, project when capacity will be reached, and forecast costs and budgetary requirements. In addition, this same data provides the information you need to avoid outages due to full disk errors. Storage Manager even supports your tiered storage strategy by classifying data according to frequency of access, making it easy to determine which data should be stored on a top-tier storage device and which data can be moved to tape.

Multi-Vendor Storage Performance Monitoring

Storage Manager ensures that your storage network is always running at peak performance by providing comprehensive storage performance monitoring and alerting across SAN, NAS, and DAS arrays from every major storage vendor. Using agentless performance monitoring technology, Storage Manager enables you to identify how storage resources are currently being used and how they will be used in the future—without impacting network and device performance.

SolarWinds Storage Manager delivers monitoring data on volumes, RAID groups/storage pools, disks, initiators, target ports, operational status for the array, processors and all the associations between each entity. With its powerful storage performance monitoring capabilities, Storage Manager helps you manage space consumption on RAID groups, map storage volumes back to the host and understand how these volumes are load balanced across each storage processor on the array. This gives you valuable insight into storage utilization across the enterprise, so you can identify the impact of a failure and trend and forecast for capacity planning and business continuity decisions. You can also quickly and easily configure a full range of custom and pre-defined alerts. From a single interface, you can easily set thresholds, alerts, filters and notifications. These alerts help you recognize and correct issues before your users experience performance degradation or availability issues.



Managing Virtualized Storage

Storage Manager allows you to more effectively manage VMware Thin Provisioning. Thin provisioning enables administrators to allocate storage to multiple VMs very easily on a just-enough and just-in-time basis and relies on efficient use of over-provisioning. Storage Manager helps you view, analyze and plan thin provisioning deployments by collecting and reporting on detailed information on virtual disks for managing the level of over-commitment on your datastores.

Automated Storage Discovery

Using SMI-S Provider information and APIs, Storage Manager's discovery engine will quickly scan for EMC®, LSI™, NetApp® filers, VMware vCenter™ and standalone ESX arrays. When new arrays or hosts are discovered, Storage Manager displays the hostnames and IP addresses, so you can easily assign them to the management server to be configured. The storage discovery feature saves you valuable time and makes deploying Storage Manager faster and easier than ever before.

Network Discovery

CREDENTIALS

Credentials by Device Type
Add credentials for each type of device that you would like to scan for.

Add Credential for: NetApp Filers

Order	Credential	Credential Type
1	NetApp	NETAPP
2	EMC	SMIS
3	IBM	SMIS
4	vmware	VMWARE

Cross-Vendor Storage Reporting

Storage Manager's reporting console houses hundreds of pre-defined and fully-customizable reports that provide in-depth information on every aspect of your multi-vendor storage environment, including domains, servers, volumes, files and owners. A custom grouping feature even allows you to group storage, servers and file systems into unique business-related entities for charge back, division reporting or geographic analysis. All reports can be automated, emailed and published on a schedule and exported as HTML or CSV files for further customization.

Row	Datastore Name	Datastore Used GB	Datastore Size GB	Datastore % Used	Eighty Percent	Ninety Percent
1	10.199.6.100_LocData1	59.00	60.25	99.25%	Already reached	Already reached
2	10.199.6.96_LocStorage	66.94	147.25	45.44%	2+ years	2+ years
3	10.199.6.114_LocData1	38.05	66.50	57.07%	Usage is decreasing	Usage is decreasing
4	netapp_fas960_vol01	2.56	4.75	53.82%	Aug 1, 2011	Sep 3, 2011
5	vmware-stor	250.30	585.94	42.72%	Usage is decreasing	Usage is decreasing
6	10.199.1.102_LocData1	237.21	696.50	34.05%	May 23, 2012	Aug 31, 2012
7	netapp_fas960_vol04	1.02	3.00	33.33%	2+ years	2+ years
8	10.199.6.98_LocData02	19.77	60.75	32.55%	Jan 2, 2012	Feb 22, 2012
9	10.199.6.94_LocStorage	41.66	147.25	28.30%	2+ years	2+ years
10	storage1	8.66	32.25	26.85%	2+ years	2+ years
11	MD1000-SATA-Array	291.94	1,825.50	17.06%	2+ years	2+ years

Storage Data Classification

Enjoy complete file and data classification (with drill-down capability), including automated usage trend reporting, storage capacity planning and real-time storage monitoring. These data classification capabilities can help you understand what kinds of files are being stored, their age and access history, so you can reclaim wasted space and stay compliant. Storage Manager makes it easy to build rules to identify specific files across the enterprise, obtain detailed information (host, path, owner, size, age), and take further action by sending this information to other applications via Storage Manager's self-contained reporting engine.

MODEL	MANAGES:
STM25	Up to 25 Disks
STM50	Up to 50 Disks
STM150	Up to 150 Disks
STM300	Up to 300 Disks
STM500	Up to 500 Disks
STM1000	Up to 1,000 Disks
STM1500	Up to 1,500 Disks
STM3000	Up to 3,000 Disks
STM5000	Up to 5,000 Disks
STM7500	Up to 7,500 Disks
STM10000	Up to 10,000 Disks
STM12500	Up to 12,500 Disks
STM15000	Up to 15,000 Disks

Storage LUN View

Storage LUN views provide a single pane of glass for a LUN and all related infrastructure, both physical and virtual, allowing you to diagnose performance issues. You can quickly determine if storage is truly the reason for poor performance of a VM. If you determine that the culprit is another VM or LUN, you can drill down and continue to diagnose the issue within the tool.

The new storage LUN views are the perfect integration point between SolarWinds Virtualization Manager and Storage Manager. Virtualization Manager is linked to the LUN view from the Cluster, ESX, VM or datastore view, enabling you to see the storage under your VM infrastructure, putting you just a click away from total visibility.

Multi-Vendor SAN & Fibre Channel Switch Management

SolarWinds Storage Manager provides comprehensive storage monitoring, reporting, and alerting to ensure that your storage systems are always running at peak performance across EMC, NetApp, Dell, HP, IBM, Hitachi, and more. Storage Manager also supports a broad range of Fibre Channel Switches including Brocade, Cisco MDS, McData and Qlogic.

SYSTEM REQUIREMENTS	
HARDWARE	MINIMUM REQUIREMENTS
Processors	2
Memory	4-8 GB
Hard Drive	50 GB
SOFTWARE	MINIMUM REQUIREMENTS
Operating Systems	Windows® 2003/2008 (32- or 64-bit); Linux® RedHat®/SUSE 64 bit
Console	Internet Explorer®, Mozilla® Firefox®

NOTE: The requirements listed above are recommendations that vary depending on each network configuration and server load.

About SolarWinds

SolarWinds (NYSE: SWI) provides powerful and affordable IT management software to customers worldwide from Fortune 500 enterprises to small businesses. In all of our market areas, our approach is consistent. We focus exclusively on IT Pros and strive to eliminate the complexity that they have been forced to accept from traditional enterprise software vendors. SolarWinds delivers on this commitment with *unexpected simplicity* through products that are easy to find, buy, use and maintain while providing the power to address any IT management problem on any scale. Our solutions are rooted in our deep connection to our user base, which interacts in our online community, thwack, to solve problems, share technology and best practices, and directly participate in our product development process. Learn more today at <http://solarwinds.com>.